SECTION 23 1123

FACILITY NATURAL-GAS PIPING

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LANL MASTER SPECIFICATION

When editing to suit project, author shall add job-specific requirements and delete only those portions that in no way apply to the activity (e.g., a component that does not apply). To seek a variance from applicable requirements, contact the ESM Mechanical POC.

When assembling a specification package, include applicable specifications from all Divisions, especially Division 1, General Requirements.

Delete information within “stars” during editing.

Specification developed for ML-3 / ML-4 projects. For ML-1 / ML-2, additional requirements and QA reviews are required.

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PART I GENERAL

1.1 SECTION INCLUDES

A. Building gas piping system (above grade) downstream of the site low pressure gas regulator station.

1.2 SUBMITTALS

A. Submit the following in accordance with Section 01 3300, Submittal Procedures:

1. Catalog data on pipe materials, pipe fittings, valves, pipe coating, and accessories.

2. Certification of welders and qualified welding procedure.

1.3 QUALITY ASSURANCE

A. Welders Certification and Qualified Procedure Standards

1. Interior Steel Pipe: Section IX of ASME Boiler and Pressure Vessel Code.

PART 2 PRODUCTS

2.1 PRODUCT OPTIONS AND SUBSTITUTIONS

A. Alternate products may be accepted; follow Section 01 2500, Substitution Procedures.

2.2 STEEL PIPING, ABOVE GRADE

A. Pipe: Standard wall, black steel, ASTM A53. Welded for pipe sizes above 2 inches, threaded for pipe sizes 2 inches or less.

B. Fittings: Malleable iron, threaded type, ANSI B16.3, Class 150 or standard wall, black steel, butt welding type, ASTM A234, Grade WPB.

C. Flanges: Steel, weld neck, class 150, raised face, ANSI B16.5.

D. Gasket Material: Neoprene, durometer hardness 50-65.

2.3 VALVES, ABOVE GRADE

A. Manufacturer: A.Y. McDonald, Series 10685B.

B. Valve: Iron body, FIP threaded ends, plug style, flat head wrench operated, 100 psig working pressure.

2.4 TEST PLUG (PETE's PLUG)

A. 1/4 inch NPT, brass body, neoprene core, rated for 1,000 psig, complete with sealing cap and gasket, to receive 1/8 inch O.D. probe.

PART 3 EXECUTION

3.1 INSTALLATION

A. Furnish and install gas piping in accordance with Uniform Plumbing Code, Uniform Mechanical Code, ASME B31.1 Power Piping, and 49 CFR 192 Code of Federal Regulations.

B. Do not run gas piping below buildings, structures, or in crawl spaces.

C. Do not run gas piping under walks and equipment pads adjacent to building. If unavoidable, sleeve line.

D. Pressure test piping in accordance with Section 22 0813, Testing Piping Systems.

E. Label piping in accordance with Section 22 0545, Identification for Plumbing, HVAC, and Fire piping and Equipment.

F. Paint outside gas regulator piping, valves, and appurtenances above ground to match building exterior. Refer to Section 09 9100, Painting.

G. Support piping in accordance with Section 22 0529, Hangers and Supports for Plumbing Piping and Equipment.

H. Use threaded joints for above grade piping 2 inches and smaller and butt-welded joints for piping above 2 inches.

I. Sleeve and caulk pipes penetrating exterior walls or interior bearing walls. Provide waterproof installation for exterior walls. Provide UL/FM approved through-penetration firestop system when penetrating fire-rated barriers (i.e., walls, floors, etc.).

END OF SECTION

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Do not delete the following reference information:

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FOR LANL USE ONLY

This project specification is based on LANL Master Specification 23 1123 Rev. 0, dated January 6, 2006.